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Marco Cantu'

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EXAMINER

KNABLE, GEOFFREY L

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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/532,711	<b>Applicant(s)</b> CANTU' ET AL.	
	<b>Examiner</b> Geoffrey L. Knable	<b>Art Unit</b> 1791	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 November 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 27-52 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 27-52 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 27-39 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

At lines 14-15 of claim 27 as amended, it is defined that the inner surface is pressed against the outer surface "while an at least one primary working fluid provides heat and pressure to the inner surface of the tyre." Page 13, lines 9-12 of the specification on the other hand indicates that "[s]ince the primary working fluid is of lower pressure, it will remain within said toroidal support 10 without escaping through the previously illustrated ducts" and page 13, lines 33-35 indicates that during this initial pressure stage, "the primary working fluid heats the toroidal support 10 which transmits heat to the inner surface of the tyre." Therefore, it is inaccurate and unsupported to describe that the primary working fluid provides "heat and pressure to the inner surface of the tire" at this stage in the process. This therefore represents subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter. In particular, there is no original descriptive support for the primary working fluid being designed to apply both heat *and pressure* to the inner surface of the tire at this stage in the process.

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Further, while there would be some incidental pressure at the outlets of the ducts, this is not reasonably described as pressure application to the inner surface of the tire and certainly not as currently claimed as essentially equivalent to the heat application to the inner surface of the tire. In other words, while the primary working fluid is certainly both heated and under pressure at this stage in the process, it is functionally only described as providing heat to the inner surface of the tire at this stage (i.e. it is only described as pressing the inner surface in the second/molding stage in which the diffusion gap is formed). Applicant's arguments (esp. bottom of page 16) likewise make clear that the intent in referring to pressure at this stage of the process is that this pressure applies a "separate opposing force" - again, however, the original disclosure makes clear that the opposing force at this stage in the process is from the toroidal support and not the primary pressure.

Along similar lines, since claim 27 now defines the primary working fluid both in the initial precuring stage (lines 14-15), when the tire is pressed against the support, and in the second molding stage (lines 18-19), where the tire is pressed against the mold, the antecedent for "the at least one primary working fluid" in lines 20-21 can conceivably be either stage. Since there is no original descriptive support for forming a diffusion gap in the context of the initial stage in which the tyre is pressed against the support, to the extent that the claim reads on this, this is likewise subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention, i.e. it is considered to be new matter.

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3. Claims 27-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 27, lines 20-21, the antecedent for the primary fluid passing in a diffusion gap is indefinite as there are now two parts of the process defined that include a primary working fluid, the initial pressing towards the support and the final pressing towards the molding cavity walls. Although from the original disclosure, it is clear that that diffusion gap is only formed in the part of the process in which the tire is pressed against the walls of the molding cavity, the claim is not so limited and therefore it is uncertain which step of the process this is referring to (note also the description/new matter rejection above on this same point).

In claim 31, again, the antecedent for “the pressure” is ambiguous given that both claims 27 and 30 define a “pressure” of the primary working fluid and it is not clear which is intended. This is now even more ambiguous as claim 27 now also defines both pressure steps. Again, it is not clear which of the pressure steps this is in reference to. Applicants’ arguments further confuse this issue. In particular, applicant has argued that “one skilled in the art would readily understand from claims 27 and 30 that the pressure of the at least one primary working fluid recited in claim 31 is the pressure of the at least one primary working fluid pressing the outer surface of the tyre against the walls of the molding cavity.” If claim 31 is referring to the primary working fluid pressure that presses the outer surface of the tire against the walls of the molding cavity, as argued, and not the primary fluid pressure applied in claim 30 as assumed (and as

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consistent with the original disclosure), then clarification is required of why this less than 16 bars requirement is inconsistent with the rest of the disclosure (and e.g. original claim 33) and why this should be considered to be originally described. This will not be held new matter at this point but if applicants persist in this interpretation, then a lack of description/new matter rejection will be considered. Note that the original disclosure (e.g. page 13, lines 18-23) clearly describes that the primary working fluid pressure of less than 16 bars is in reference to the pressure applied during the pressing of the inner surface of the tire against the outer surface of the mold. Clarification is required of this inconsistency as well as the lack of definite antecedent for the pressure defined in claim 31.

4. Claims 27-29, 33-50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over Midgley et al. (US 1,394,928) taken in view of Caretta et al. (US 6,409,959) and Clinefelter et al. (US 1,407,839).

These references are applied for substantially the same reasons as set forth in the last office action. The suggestion in Midgley that the pressure is to prevent blowing due to expansion of entrapped gases (and that the mold sections are separated at this stage) would have reasonably been read as defining pressing against the core since the outer tire surface is exposed and otherwise, the blowing could not be prevented. In other words, as well known to the ordinary artisan, gases/air are often trapped between layers in tire building and Midgley is suggesting using compressed air during the initial regional vulcanization to prevent any trapped air from expanding within the tire

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structure. Such would require external pressure against the core while heat is applied though the core.

5. Claim 51 is rejected under 35 U.S.C. 103(a) as being unpatentable over Midgley et al. (US 1,394,928) taken in view of Caretta et al. (US 6,409,959) and Clinefelter et al. (US 1,407,839) as applied above, and further in view of Kobayashi (US 6,350,402) as applied in the last office action.

6. Claims 30-32 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 1<sup>st</sup> and 2nd paragraphs, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Although Midgley would suggest initial regional curing with an external air pressure application and internal heat, and the secondary references would provide ample motivation to use a ducted core to provide pressure in a diffusion gap during final curing against the mold walls, the closest prior art, whether taken singly or in combination would not teach or render obvious, during an initial pressing of the tire against the outer surface of the support, providing a pressure of the secondary working fluid at a greater pressure than that of the primary working fluid.

7. Applicant's arguments filed 11/21/2008 have been fully considered but they are not persuasive.

Applicants' arguments with respect to the previous 35 USC 112, second paragraph rejection of claim 31 have been treated within the statement of rejection above. The other 112 rejections were withdrawn but note several new 112 issues above.

With respect to the prior art, applicant first argues that neither Caretta not Clinefelter disclose a secondary working fluid for pressing the inner surface of the tire against an outer surface of the support. This argument has been considered but is unpersuasive. Such a disclosure is found in the primary reference to Midgley.

With respect to Midgley, applicant urges that this reference requires mechanical pressure, reference being made to page 1, lines 79-90. While the embodiments broadly described at these lines define mechanical pressure, clearly other embodiments are contemplated where such mechanical pressure is *not* applied and which can include air pressure being applied - e.g. note page 2, lines 15-38. As to the teachings of Midgley at pages 2 and 5 that suggest that compressed air may be applied to the outside of the casing, applicant argues that there is nothing in these teachings that the pressure is applied against the surface of the tire. This argument is unconvincing. As clearly set forth at page 2, lines 22-38 and page 5, lines 31-41, the mold sections are separated from one another and thus the external side of the tire is subject to the compressed air pressure. Such pressure would further certainly have been required to press against the outer surface of the tire if the expansion of the entrapped gases within the tire is to be prevented. If pressed against the outer surface, the pressure would have necessarily pressed towards the support. Applicant's arguments in this regard are therefore unconvincing.

It is also argued that Midgley does not teach or suggest a second opposing working fluid, i.e. that a "second opposing force is needed or advisable". This argument is unconvincing as first, as noted above, it is not considered that the original disclosure



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provides support for the primary working fluid actually providing the opposing pressure force at this stage in the process. Rather, as detailed in the description/new matter rejection above, the original disclosure indicates that the pressure does not escape from the ducts in the support during this initial vulcanization. Thus, while the primary fluid is under pressure at this stage in the process, the opposing force to the secondary/externally applied pressure is from the support itself. The primary working fluid is principally providing the heat at this stage in the process. It is noted however that the rejection of claims 30-32 has been withdrawn as the prior art is not considered to teach or render obvious additionally, during the initial pressing of the tire against the outer surface of the support while both primary and secondary working fluids under pressure are applied, providing a pressure of the secondary working fluid at a greater pressure than that of the primary working fluid.

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey L. Knable whose telephone number is 571-272-1220. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 571-272-1226. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Geoffrey L. Knable/  
Primary Examiner, Art Unit 1791

G. Knable  
February 1, 2009